

CLAIMS

Sub P
What is claimed is:

A hardware system for performing MAC (Media Access Control) functions between a host CPU (Central Processing Unit) and a Network, the system comprising:

- 5 a bus interface that sends frames to the host CPU and receives frames from the host CPU;
- a Tx state machine that sends frames to the network;
- an Rx state machine that receives frames from the network;
- a Tx buffer that receives frames from the bus interface and sends frames to the Tx state machine;
- 10 an Rx buffer that receives frames from the Rx state machine and sends frames to the buffer interface;
- an encryption/decryption block that sends and receives frames between the Tx buffer and the Rx buffer;
- 15 a CRC (Cyclic Redundancy Code) block that receives frames from the Rx state machine and the Tx buffer and sends frames to the Tx state machine; and
- a timer block that sends and receives frames from components of the system.

2. A method for processing frames in a MAC layer with hardware operations, comprising:
 - receiving an incoming frame from the network;
 - 20 processing the incoming frame for FLPM (Frame Level Protocol Manager) time-critical functions;
 - from the act of processing the incoming frame for FLPM time-critical functions, sending an outgoing frame to the host;

from the act of processing the incoming frame for FLPM time-critical functions, formulating FLPM time-critical responses;

from the act of processing the incoming frame for FLPM time-critical functions, accumulating statistics;

5 from the act of processing the incoming frame for FLPM time-critical functions, updating a MAC state;

from the act of formulating FLPM time-critical responses; formulating an outgoing frame;

10 from the act of formulating an outgoing frame, transmitting the outgoing frame to the network;

generating a special frame for the act of formulating an outgoing frame; and

receiving an incoming frame from the host CPU for the act of formulating an outgoing

frame;

Add X3